

Attorney Docket No. DEJI 1001-IUS

**Remarks**

The above Amendments and these Remarks are in reply to the Office Action mailed December 29, 2003. No fee is due for the addition of any new claims.

Claims 1-18 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-18 as being unpatentable over Patent No. 6,260,059 to Ueno in view of U.S. Patent No. 6,304,864 to Liddy. The present Response amends claims 1, 2, 5-9, 11, and 13-18 leaving for the Examiner's present consideration claims 1-18. Reconsideration of the rejections is requested.

**I. THE REJECTIONS**

The Examiner rejected claims 1-18 under 35 U.S.C. 103(a) as being unpatentable over a combination of Ueno and Liddy.

Applicant will discuss the independent claims first, followed by the dependent claims.

**A. Independent Claim 1**

Claim 1 is generally directed to a method in which, among other things, a first agent receives a query from an upchain agent, the first agent queries its own downchain agents, and the first agent responds to the upchain agent before receiving all responses from the downchain agents. The Examiner has cited Ueno's Fig. 2 and Ueno's col. 12, line 20, through col. 13, line 15, as teaching these limitations.

Claim 1 has been amended to call for, among other things, the steps of a first agent:

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querying each of a **plurality of agents, each immediately downchain** of said first agent, ...; and

responding to said upchain agent ... after said first agent **receives at least one response from said agents immediately downchain** of said first agent, but before said agent receives all responses from said agents immediately downchain of said first agent.

Ueno does not teach these features.

One of the differences between Ueno's system and Applicant's system is that Ueno appears to always send his request messages through a linear succession of agents whereas Applicant's system can send its queries to multiple immediately downchain agents in parallel. Perhaps this can be best illustrated in the following drawings, in which Fig. A illustrates an example network according to Ueno (taken from Ueno's Fig. 2), and Fig. B illustrates an example network according to Applicant's system (taken from a portion of Applicant's Fig. 9):

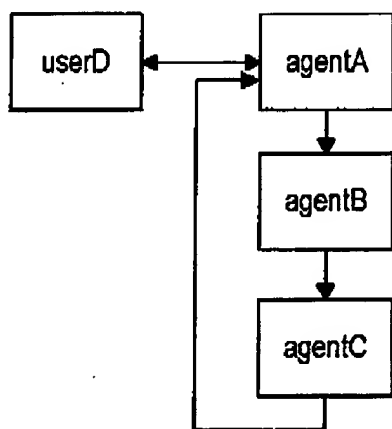


Fig. A  
(Ueno Fig. 2)

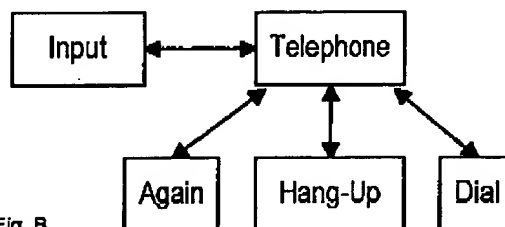


Fig. B  
(Portion of Applicant's Fig. 9)

It can be seen that in Ueno, an agent (such as agentA) appears to send its request messages to only one next agent at a time (agentB in the drawing above), whereas in Applicants'

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system, an agent (such as the "Telephone" agent) can send its queries to multiple immediately downchain agents (i.e., to the "Again", "Hang-Up" and "Dial" agents).

In Ueno, it appears that only if the first agent in the succession cannot provide the requested information, does the request get forwarded on to the next agent in succession, and so on until an agent (agentC in the drawing above) is able to provide the requested information. This method of operation is mentioned repeatedly in the text of Ueno as a "succession" of agents (see, for example, Ueno's abstract: "the agent originates messages for *successively* propagating the content portion of that information request message to other agents via the network.") (See also col. 20, line 30; col. 22, line 54; col. 23, line 28; and step S7 of Fig. 8: "Message Contents *Successively* Processed by Other Agents").) The sequential nature of Ueno's method is also shown repeatedly in his drawings. (In addition to Ueno's Fig. 2, see also his Figs. 1B, 11, 17, 20, 24, 26 and 29).

**It therefore does not appear that a Ueno agent has the ability to send a request to "a plurality of agents, each immediately downchain of" the requesting agent, as called for in Applicant's claim. Ueno can send the request to more than one agent, but only one of them is immediately downchain of the sending agent.**

Applicant's system as shown above, on the other hand, does have the ability to transmit its queries to a plurality of immediately downchain agents, as called for in Applicant's claim.

Ueno does mention in several places that an agent can generate more than one propagation message and transmit them to each of the propagation destination agents. See, e.g., Ueno, col. 15, lines 54-64. However, Ueno does not appear to teach that any more than one of the

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propagation destination agents be immediately downchain from the sending agent. Applicant believes that a fair reading of Ueno, including the many places in which requests are referred to as being forwarded through different agents "in sequence", is that when multiple propagation messages are generated they are all transmitted together to the first propagation destination agent, which if it cannot provide a response, forwards the messages together to the next propagation destination agent, and so on in *sequence* through all the propagation destination agents of the propagation messages, until one provides a response. In a sequential method like this, only the first propagation destination agent is immediately downchain from the sender.

**Regardless of whether or not Ueno can transmit multiple propagation messages to multiple immediately downchain agents, Ueno clearly does not say what an agent is to do if it receives *responses* from more than one of its propagation destination agents. The answer to that question is part of the subject matter of Applicant's claim 1.**

Applicant's claim 1, as amended, calls for, among other things, the steps of a first agent:

querying each of a plurality of agents, each immediately downchain of said first agent, ...; and

responding to said upchain agent ... after said first agent receives at least one response from said agents immediately downchain of said first agent, but before said agent receives all responses from said agents immediately downchain of said first agent.

As an example, in the Fig. B diagram above, these steps might be satisfied if the

"Telephone" agent sends its query to each of its immediately downchain agents (the "Again",

"Hang-Up" and "Dial" agents), receives responses from the "Again" and "Hang-Up" agents, and

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then before receiving a response from the "Dial" agent, the "Telephone" agent responds to the "Input" agent.

Ueno, on the other hand, even if it does teach that an agent can transmit request messages to more than one agent immediately downchain of the requesting agent, still does not teach Applicant's step of "responding to said upchain agent ... *after said first agent receives at least one response from said agents immediately downchain of said first agent, but before said agent receives all responses from said agents immediately downchain of said first agent.*" As explained above, Ueno does not appear to say anything at all about a transmitting agent receiving responses from more than one downchain agent, whether immediately downchain or not. He certainly does not teach the counterintuitive step of the transmitting agent responding to its own upchain agent *before* receiving all expected responses from its *downchain* agents.

**In the Office Action**, the Examiner notes that in Ueno's Fig. 2, agentA does not receive all responses from its downchain agents before responding to its upchain agent userD. Specifically, the Examiner notes agentA does not receive a response from agentB before agentA sends its own response to userD.

But Applicant's claim 1 as amended calls for responding to the upchain agent *after one* but less than all of the *immediately* downchain agents have responded. In Ueno's Fig. 2, agentB is the only agent immediately downchain of agentA, and since agentB has not responded to agentA before agentA responds to its upchain agent, it cannot be said that Ueno's agentA responds to its upchain agent userD after one of the immediately downchain agents have responded to agentA.

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Accordingly, as amended, Ueno's Fig. 2 fails to satisfy the limitation of Applicant's claim 1 calling for the first agent to respond to its upchain agent "after said first agent receives at least one response from said agents immediately downchain of said first agent, but before said agent receives all responses from said agents immediately downchain of said first agent". Nor does Liddy remedy this deficiency.

Applicant therefore submits that Claim 1 should be patentable.

**B. Formerly Independent Claim 5**

Claim 5 calls for, among other things, the query of downchain agents to include a first "depth-of-search indication". The Examiner argues that the "Count" feature of Ueno constitutes such a depth-of-search indication.

Applicant respectfully stands by his position that the two concepts are different and that for that reason, Ueno cannot anticipate.

In addition, Applicant has now amended Claim 5 to depend from independent claim 1. Claim 5 therefore should be patentable also for all the same reasons as claim 1.

Accordingly, it is respectfully submitted that claim 5 should be patentable.

**C. Independent Claim 11**

Claim 11 calls for, among other things, steps of an originating agent querying at least one agent downchain of the originating agent a first time regarding a subject message, and the

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originating agent subsequently querying "said queried agents" a second time relative to the same subject message.

Ueno does not teach an originating agent querying the same downchain agents a second time that it queried a first time, regarding the same subject message.

The Examiner appears to point to repetitive execution of Ueno's second matching operation as satisfying the claim's call for querying the agent a second time. But as pointed out in Applicant's Response A, the second matching operation is initiated by the downchain agent itself, not in response to any second querying operation initiated from the *originating* agent.

**Claim 11 has now been amended to emphasize that it is the "originating agent," not the downchain agent, that performs the step of querying a second time.** This does not change the scope of the claim, because even as originally written, the preamble of the claim called for the step of querying the agent a second time to be performed by the originating agent, not by the downchain agent. Applicant again submits that Ueno does not teach this limitation.

**In addition,** claim 11 has been amended also to include limitations similar to those in claim 1. In particular, claim 11 now calls for the downchain agent (which is now called the "first" agent in the amended claim), to perform the following steps:

in response to said first query of said first agent,  
said first agent querying each of said agents  
immediately downchain of said first agent, whether the  
immediately downchain agent considers at least part of  
said subject message to be in the immediately downchain  
agent's natural language interpretation domain;

in response to said first agent receiving at least one  
response from said immediately downchain agents but  
without waiting to receive responses from all of said  
immediately downchain agents, said first agent

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responding to said originating agent whether at least a part of said subject message is within the natural language interpretation domain of said first agent;

**Claim 11 is therefore believed to be patentable also for all the reasons set forth above with respect to claim 1.**

Accordingly, it is respectfully submitted that claim 11 should be patentable.

**D. Dependent claims 2-4, 6-10 and 12-18**

These claims all depend ultimately from one of the independent claims 1, 5 or 11, and include all the limitations of the independent claim. These claims are therefore believe to be patentable for at least the same reasons as their respective independent claims. Applicant also submits that these claims each add their own limitations which rendered them patentable in their own right. Applicant reserves the right to point out such features should become necessary or desirable at a later date.

**II. CONCLUSION**

The amendments to the dependent claims are made to conform to those in the independent claims.

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The



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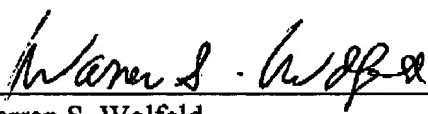
Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0869 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: 29 March 2004.

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